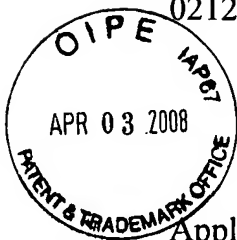


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PATENT APPLICATION



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Wolfgang Hirschburger

Serial No.: 10/757,660

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For: NOSE TIP CONTROL FOR
CORDLESS HIGH SPEED ROTARY
TOOL

Art Unit: 3722

Examiner: Gates, Eric Andrew

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) Date Registration No. 26174
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) Appr. February 20, 1998
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**APPELLANT'S BRIEF ON APPEAL
PURSUANT TO 37 CFR § 41.37**

This Appeal Brief is in support of Applicant's Notice of Appeal dated
January 31, 2008.

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REAL PARTY IN INTEREST

Credo Technology Corporation.

RELATED APPEALS AND INTERFERENCES

None.

STATUS OF CLAIMS

Claims that are pending, finally rejected and appealed are 1-12.

STATUS OF AMENDMENTS AFTER FINAL

There have been no amendments after the third final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

The independent claims 1 and 10 are annotated with references to the specification and drawings, as follows:

1. A control mechanism (10; Fig. 1; Pg. 3/4-4/4) for a rotary hand tool having a generally cylindrical housing in which a drive motor is located, the housing having a generally tapered nose portion (12, Figs. 1, 2; Pg. 3/22-27) at an end from which a motor output shaft extends and a grip portion (12, Figs. 1, 2; Pg. 4/9-19) around which an operator can wrap a hand during operation of the tool and within which portion the motor is housed, said control mechanism being a part of the tool and located substantially within the housing thereof and comprising:

an electrical control circuit (Fig. 5, Pg. 6/8-7/2) contained entirely within said housing, said circuit controlling the application of power to and the operation of the motor, including supplying current to the motor; and

a light touch switch (30, Figs. 4, 5; Pg. 5/3-6/8) having at least a first position and a second position coupled to said electrical control circuit for selectively enabling or disabling said control circuit to turn the motor on and off, wherein said motor current does not flow through said switch;

wherein said switch is disposed on the tapered nose portion of the rotary hand tool such that an operator can actuate said switch without altering the operator's grip on the tool.

10. Apparatus (10; Fig. 1; Pg. 3/4-4/4) for selectively controlling power applied to and the operation of the motor of a rotary hand tool having a generally cylindrical housing that includes a generally tapered nose portion (12, Figs. 1, 2; Pg. 3/22-27) that has a gradually reduced circumference toward an end from which an output shaft extends, and a grip portion (12, Figs. 1, 2; Pg. 4/9-19) around which an operator wraps a hand during operation of the tool, said apparatus comprising:

electrical control circuitry (Fig. 5, Pg. 6/8-7/2) for controlling power, including motor current that is applied to the motor, said electrical circuitry being a part of the tool and located entirely within the housing;

a switch (30, Figs. 4, 5; Pg. 5/3-6/8) having a switch button (34) and containing at least a pair of switch contacts that are selectively opened and closed responsive to actuation of said switch button, said switch being operatively connected to said control circuitry to control the operation of the motor, including the application of motor current to the motor, said switch being configured so that said motor current does not pass through the switch contacts during operation of the motor, said switch being a part of the tool and located substantially within the tapered nose portion thereof; and

a cavity disposed in the tapered nose portion of the tool that is configured to receive at least a portion of said switch and permit actuation of said switch button (Pg. 11, claim 10, ln 5-6).

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Whether the §102(b) rejection of claims 1-5 based upon Crutchfield should be reversed.

Whether the §103(a) rejection of Claims 6-9 over Crutchfield in view of Von Hollen should be reversed.

Whether the §103(a) rejection of Claims 10 and 12 over Crutchfield in view of Peot should be reversed

Whether the §103(a) rejection of Claim 11 over Crutchfield in view of Peot and further in view of Von Hollen should be reversed.

ARGUMENT

Claims 1-5 are not anticipated by Crutchfield under 35 U.S.C. 102(b).

The examiner has rejected claim 1 and others as being anticipated first by Market, then Von Hollen and lastly by Crutchfield, even though Crutchfield was cited in the initial office action.

Claim 1 presently reads as follows:

1. A control mechanism for a rotary hand tool having a generally cylindrical housing in which a drive motor is located, the housing having a generally tapered nose portion at an end from which a motor output shaft extends and a grip portion around which an operator can wrap a hand during operation of the tool and within which portion the motor is housed, said control mechanism being a part of the tool and located substantially within the housing thereof and comprising:

an electrical control circuit contained entirely within said housing, said circuit controlling the application of power to and the operation of the motor, including supplying current to the motor; and

a light touch switch having at least a first position and a second position coupled to said electrical control circuit for selectively enabling or disabling said control circuit to turn the motor on and off, *wherein said motor current does not flow through said switch;*

wherein said switch is disposed on the tapered nose portion of the rotary hand tool such that an operator can actuate said switch without altering the operator's grip on the tool.

Crutchfield fails to anticipate, teach or suggest this claim because it fails to include, *inter alia*, a light touch switch having at least a first position and a second position coupled to said electrical control circuit for selectively enabling or disabling said control circuit to turn the motor on and off *wherein the motor current does not flow through said switch*. While the examiner now contends in paragraph 4 that Crutchfield meets the claim language and particularly the language "wherein said motor current does not flow through said switch 30" (rather than 28 in the previous rejection), this is again an

erroneous statement that is contrary to the explicit description in the Crutchfield patent.

It is also pointed out and emphasized that the examiner has admitted in paragraph 14 with regard to the rejection of claims 10 and 12 over Crutchfield in view of Peot that *“Crutchfield does not distinctly disclose said switch being configured so that said motor or current does not pass through the switch contacts during operation of the motor”*. It is amazing if not bizarre that the examiner admits in this rejection the very point of applicants’ argument that Crutchfield fails to anticipate teach or suggest claim 1.

It is also not understood how it can be proper for the examiner to indicate that applicants’ arguments with respect to the rejection of claims 1 and 10 under 35 U.S.C. 102(b) based on Crutchfield have been considered and *are persuasive and therefore the rejection has been withdrawn*, and then render a new ground of rejection is made under 35 U.S.C. 102(b) based on the same Crutchfield patent!

The only difference between the two rejections of was a change describing Crutchfield’s the light touch switch as switch 30 (rather than 28) and the parenthetic expression “mechanically coupled through contact with microswitch 78. It should not make any difference. Regardless of whether one uses the switch assembly 28 or a switch button device 30, it is the same physical structure that is described in the specification of Crutchfield with specificity.

Crutchfield has always had only been one actual switch device and that is the microswitch device 78. The patent specification at column 4, lines 46-49 states that “switch assembly 28 comprises front mounting assembly 62, microswitch device 78, switch button device 30 and spring device 82. At paragraph 4, lines 55-58, in connection with Fig. 4b, it describes a “switch button device 30 comprises a ring-like portion 86 and a lever portion 88 which is cantilevered from said ring-like portion 86 at approximately 85°.” *The switch button device 30 is not a switch*. It is just a mechanical linkage. The

switch of Crutchfield is the microswitch device 78 and microswitch device 78 *does have motor current flowing through it*. Therefore, Crutchfield fails to anticipate, teach or suggest claim 1.

There are also other relevant considerations with regard to the actual operation of Crutchfield that support applicants' position. More particularly, the abstract states that a rectifier device is operatively connected to receive the AC voltage from the wall outlet and provide a DC output to the DC motor. A switch assembly is operatively connected between the output of the rectifier device and the DC motor. Moreover, at column 4, lines 27-45, describes the circuitry of Crutchfield and more particularly at lines 34-40 it states that "the 115-120 volt AC from the wall outlet is provided through electrical cord 20 to the rectifier means 76 which then provides the 115-120 volt DC for the DC motor. Microswitch device 78 which is slidably received in a predetermined portion of front mounted assembly 62 is operatively connected between the output of the rectifier means 76 and the DC motor 26." Not only that, column 7, lines 40-42 states a switch assembly is operatively connected between said output from said rectifier means and an input to said 115-120 volt DC motor.

While there is no specific circuit diagram, there can be no ambiguity from these recitations that the microswitch device 78 is connected in circuit between the motor and the rectifier and therefore the motor current necessarily flows through the switch which is totally opposite from the language of claim 1.

It is not surprising that Crutchfield would have his switch in circuit with the DC motor because it is a simple small electrical erasing machine for presumably erasing ink or pencil marks from writing materials such as paper or the like and there is very little load being applied to the eraser motor. For all of these reasons, it is believed that claim 1 should be allowed and such action is respectfully requested.

The dependent claims 2-5 necessarily incorporate the features of the claim 1 from which they depend in addition to defining other features and/or functionality and are therefore believed to be in condition for immediate allowance.

**Claims 6-9 are not unpatentable under 35 U.S.C. 103(a)
over Crutchfield in view of Von Hollen**

The examiner has cited Von Hollen as teaching the use of a layer of rubber surrounding the portion of the nose portion in which a switch 55-49 is disposed, and that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have combined the tool of Crutchfield with the flexible grip material of Von Hollen. However, these claims are clearly dependent upon claim 1 and necessarily incorporates the subject matter of it.

Since Von Hollen does not supply the basic deficiency of Crutchfield because Crutchfield does not distinctly disclose *wherein said motor current does not flow through said switch* as required in claim 1, it is believed that these dependent claims are in condition for immediate allowance.

**Claims 10 and 12 are not unpatentable under
35 U.S.C. 103(a) over Crutchfield in view of Peot.**

Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crutchfield in view of Peot.

Independent claim 10 is set forth below:

10. Apparatus for selectively controlling power applied to and the operation of the motor of a rotary hand tool having a generally cylindrical housing that includes a generally tapered nose portion that has a gradually reduced circumference toward an end from which an output shaft extends, and a grip portion around which an operator wraps a hand during operation of the tool, said apparatus comprising:

electrical control circuitry for controlling power, including motor current that is applied to the motor, said electrical circuitry being a part of the tool and located entirely within the housing;

a switch having a switch button and containing at least a pair of switch contacts that are selectively opened and closed responsive to actuation of said switch button, said switch being operatively connected to said control circuitry to control the operation of the motor, including the application of motor current to the motor, *said switch being configured so that said motor current does not pass through the switch contacts during operation of the motor*, said switch being a part of the tool and located substantially within the tapered nose portion thereof; and

a cavity disposed in the tapered nose portion of the tool that is configured to receive at least a portion of said switch and permit actuation of said switch button.

While the examiner admits that Crutchfield “does not distinctly disclose said switch being configured so that said motor current does not pass through the switch contacts during operation of the motor”, it is contended that Peot somehow supplies this basic deficiency. It does not.

Peot has an on/off switch 31 shown in Fig. 2. Peot also has a cord 16 that has conductors 18 and 19 that are input to the circuitry of Fig. 2, the cord being shown in Fig. 1 with the plug for plugging the cord into an AC electrical source. Electrical line 18 extends to and drives the motor 20 through any one of the three legs that are parallel to one another as shown in Fig. 2,

namely, the leg containing the switch 36 or the leg containing switch 38 or the leg containing switch 34 which is in series with the speed control module 32.

The on/off switch 31 can be operated by closing any one of these three switches 34, 36 or 38. While crystal clear to any one of ordinary skill in the art, it is also described in the specification at page 6, lines 56-58: "Thus, closure of the switch 34 activates motor 20 in a direction determined by switch 26 at a speed determined by the speed control circuit 32" and at lines 59-64 "a separate on/off switch 36 is provided in parallel with the series combination of speed control circuit 32 and control circuit 34. Thus, upon closure of switch 36, motor is activated to rotate at a fixed speed in the direction determined by the setting of armature 30 of switch 26."

The specification also states at lines 64-68 "a separate, bypass control switch 38 is provided as a safety measure for the speed control circuit 32 and the switch 34, to provide a means for turning the motor on and off in the event of failure of either the speed control circuit or the control switch 34."

Anyone that has knowledge of electrical circuits will realize that this statement is incorrect and that as long as one of the switches 34 or 36 is closed, power will be applied to the motor and opening or closing switch 38 would have no effect on the operation of the motor.

What is clear from this description is that regardless of which of the switches 34, 36 or 38 is used, motor current originating at line 18 does in *fact flow through the switch* and therefore neither Crutchfield nor Peot, applied singularly or in combination, teach or suggest the apparatus defined in claim 10. Reconsideration and allowance of this claim is respectfully requested.

The dependent claim 12 necessarily incorporate the subject matter of the independent claim 10 from which it depends and in addition add other features and/or functionality that are not found in the independent claim and for this reason dependent claim 12 is also believed to be in condition for immediate allowance.

**Claim 11 is not unpatentable under 35 U.S.C. 103(a) over
Crutchfield in view of Peot and further in view of Von Hollen.**

The examiner has cited Von Hollen as teaching the use of a layer of rubber surrounding the portion of the nose portion in which a switch 55-49 is disposed, and that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have combined the tool of Crutchfield with the flexible grip material of Von Hollen. However, this claim is clearly dependent upon claim 10 and necessarily incorporates the subject matter of it.

Since Von Hollen does not supply the basic deficiency of Crutchfield and Peot because neither do not distinctly disclose said switch being configured so that said motor current does not pass through the switch contacts during operation of the motor as required in claim 10, it is believed that claim 12 is in condition for immediate allowance.


CONCLUSION

The dependent claims necessarily incorporate the features of the claims from which they depend in addition to defining other features and/or functionality and are therefore believed to be in condition for immediate allowance. If the rejection of claim 1 is reversed, claims 2-4 and 6-8 should be allowed.

For the above reasons, applicant requests the Board to reverse the outstanding rejections. The case should then be permitted to pass to allowance.

Respectfully submitted,

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CLAIMS - APPENDIX

1. A control mechanism for a rotary hand tool having a generally cylindrical housing in which a drive motor is located, the housing having a generally tapered nose portion at an end from which a motor output shaft extends and a grip portion around which an operator can wrap a hand during operation of the tool and within which portion the motor is housed, said control mechanism being a part of the tool and located substantially within the housing thereof and comprising:

an electrical control circuit contained entirely within said housing, said circuit controlling the application of power to and the operation of the motor, including supplying current to the motor; and

a light touch switch having at least a first position and a second position coupled to said electrical control circuit for selectively enabling or disabling said control circuit to turn the motor on and off, wherein said motor current does not flow through said switch;

wherein said switch is disposed on the tapered nose portion of the rotary hand tool such that an operator can actuate said switch without altering the operator's grip on the tool.

2. The control mechanism of claim 1 wherein said switch is configured to be generally rectangular.

3. The control mechanism of claim 1 wherein said switch has a predetermined thickness.

4. The control mechanism of claim 1 wherein said first position disables said electrical control circuit and said second position enables

said electrical control circuit.

5. The control mechanism of claim 1 wherein the tapered nose portion on which said switch is disposed generally corresponds to a location of the operator's index finger when grasping the tool.

6. The control mechanism of claim 1 further comprising a layer of flexible grip material surrounding at least a portion of the nose portion.

7. The control mechanism of claim 1 further comprising a layer of grip material surrounding the portion of the nose portion in which said switch is disposed.

8. The control mechanism of claim 6 further comprising a layer of rubber surrounding the portion of the nose portion in which said switch is disposed.

9. The control mechanism of claim 6 wherein said flexible grip material abuts said switch when said compressible material is compressed.

10. Apparatus for selectively controlling power applied to and the operation of the motor of a rotary hand tool having a generally cylindrical housing that includes a generally tapered nose portion that has a gradually reduced circumference toward an end from which an output shaft extends, and a grip portion around which an operator wraps a hand during operation of the tool, said apparatus comprising:

electrical control circuitry for controlling power, including motor current that is applied to the motor, said electrical circuitry being a part of the tool and located entirely within the housing;

a switch having a switch button and containing at least a pair of switch contacts that are selectively opened and closed responsive to actuation of said switch button, said switch being operatively connected to said control circuitry to control the operation of the motor, including the application of motor current to the motor, said switch being configured so that said motor current does not pass through the switch contacts during operation of the motor, said switch being a part of the tool and located substantially within the tapered nose portion thereof; and

a cavity disposed in the tapered nose portion of the tool that is configured to receive at least a portion of said switch and permit actuation of said switch button.

11. Apparatus as defined in claim 10 further comprising a layer of grip material surrounding at least a portion of the grip portion in which said switch is located.

12. Apparatus as defined in claim 10 wherein the outer surface of said switch button is generally coextensive with the outer surface of said nose portion.

EVIDENCE - APPENDIX

None.

RELATED PROCEEDINGS- APPENDIX

None.